## Bibliographic Fields

### Document Identity

| | |
|---|---|
| (19)▯▯▯▯ | (19) [Publication Office] |
| ▯▯▯▯▯▯▯▯ | Japan Patent Office (JP) |
| (12)▯▯▯▯▯ | (12) [Kind of Document] |
| ▯▯▯▯▯▯▯ | Unexamined Patent Publication (A) |
| (11)▯▯▯▯▯ | (11) [Publication Number of Unexamined Application] |
| ▯▯▯▯▯▯▯▯▯ | Japan Unexamined Patent Publication Hei 9 - 227840 |
| (43)▯▯▯▯ | (43) [Publication Date of Unexamined Application] |
| ▯▯▯▯▯▯▯▯▯▯▯▯ | 1997 (1997) September 2 days |

### Public Availability

| | |
|---|---|
| (43)▯▯▯▯ | (43) [Publication Date of Unexamined Application] |
| ▯▯▯▯▯▯▯▯▯▯▯▯ | 1997 (1997) September 2 days |

### Technical

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| (54)▯▯▯▯▯▯ | (54) [Title of Invention] |
| ▯▯▯▯▯▯▯ | **SURFACE PROTECTION FILM** |
| (51)▯▯▯▯▯▯6▯▯ | (51) [International Patent Classification, 6th Edition] |
| C09J 7/02 JHU | C09J 7/02 JHU |
| JJY | JJY |
| ▯FI▯ | [FI] |
| C09J 7/02 JHU | C09J 7/02 JHU |
| JJY | JJY |
| ▯▯▯▯▯ | [Number of Claims] |
| ▯ | 1 |
| ▯▯▯▯▯ | [Form of Application] |
| ▯▯ | OL |
| ▯▯▯▯ | [Number of Pages in Document] |
| ▯ | 3 |

### Filing

| | |
|---|---|
| ▯▯▯▯▯ | [Request for Examination] |
| ▯▯▯ | Unrequested |
| (21)▯▯▯▯▯ | (21) [Application Number] |
| ▯▯▯▯▯▯▯▯ | Japan Patent Application Hei 8 - 38039 |
| (22)▯▯▯▯ | (22) [Application Date] |
| ▯▯▯▯▯▯▯▯▯▯▯▯▯ | 1996 (1996) February 26 days |

## Parties

### Applicants

| | |
|---|---|
| (71)□□□□ | (71) [Applicant] |
| □□□□□ | [Identification Number] |
| □□□□□□□ | 000002174 |
| □□□□□□ | [Name] |
| □□□□□□□ | **SEKISUI CHEMICAL CO. LTD. (DB 69-053-6024 )** |
| □□□□□□ | [Address] |
| □□□□□□□□□□□□□□ | Osaka Prefecture Osaka City Kita-ku Nishi Tenma 2-4-4 |

### Inventors

| | |
|---|---|
| (72)□□□□ | (72) [Inventor] |
| □□□ | [Name] |
| □□ □ | Konuma Shigeru |
| □□□□□□ | [Address] |
| □□□□□□□□□ □□□□□□□□ | Inside of Saitama Prefecture Hasuda City Kurohama 3535 Sekisui Chemical Co. Ltd. (DB 69-053-6024 ) |

## Abstract

| | |
|---|---|
| (57)□□□ | (57) [Abstract] |
| □□□ | [Problems to be Solved by the Invention] |
| □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | There being a fisheye or other microscopic protuberance in base film tackiness for article being attached making use ofsmall tackifier layer, it decreases quantity of air which isinvolved, at same time, external appearance quality of article being attached it offers surface protection film which does not have fact that it decreases by fractionize doing the particle of air which is involved barely. |
| □□□□□ | [Means to Solve the Problems] |
| □□0.910~0.918g/cm$^3$ □□□□□□□□□□□□□□□□□□□□□□□□6~10□□%□□□□- □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | surface protection film□ where in one surface of base film which consists of polyethylene resin of density 0.910~0.918 g/cm$^3$ , tackifier layer where vinyl acetate content designates ethylene-vinyl acetate copolymer of 6 - 10 weight% as main component is provided and makes feature |

## Claims

| | |
|---|---|
| □□□□□□ | [Claim(s)] |
| □□□1□ | [Claim 1] |
| □□0.910~0.918g/cm$^3$ □□□□□□□□□□□□□□□□□□□□□□□□6~10□□%□□□□- □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | surface protection film□ where in one surface of base film which consists of polyethylene resin of density 0.910~0.918 g/cm$^3$ , tackifier layer where vinyl acetate content designates ethylene-vinyl acetate copolymer of 6 - 10 weight% as main component is provided and makes feature |

## Specification

[Description of the Invention]

[0001]

[Technological Field of Invention]

As for this invention, temporary adhesion doing in synthetic resin sheet□ decorative plywood□ metal plate□ painted steel plate or other surface surface protective film which is usedin order to protect surface, when processing and deposit of the dust when transporting and scratching will be, regard, furthermore asfor details, while surface protective film is stuck to above-mentioned article being attached, It regards surface protective film which is used in order to protect surface of synthetic resin sheet which is processed under foreign matter introduction inspecting and high temperature heating ofabove-mentioned article being attached.

[0002]

[Prior Art]

Until recently, it can use those where it can provide tackifier layer in the one surface of base film as surface protective film of this kind, but when when thesticking to article being attached, sticking tension is large, after sticking the surface protective film contracting, it peels off from above-mentioned article being attached, but inorder to prevent this, high density polyethylene film where tensile modulus is large it is used as base film.

It does not peel off from article being attached with contraction of theabove-mentioned surface protective film as adhesive which is used for also, above-mentioned tackifier layer, as when sticking to article being attached, entraining of air does not occur, there is a tendency where it can use adhesive of high adhesion strength.

[0003]

Recently, with automation and development of labor reduction, adhesion work of surface protective film to above-mentioned article being attached furthermore, work surface protective film after using of peeling off from article being attached automatic exfoliationmachine is introduced.

When surface protective film it peels off making use of above-mentioned automatic exfoliation machine, it competes with performance where as for adhesion strength for above-mentioned article being attached if possible small thing is desirable, attime of adhesion work to above-mentioned article being attached, is sought from the adhesive.

[0004]

effort which is made low eclectically has done sticking tension to above-mentioned article being attached,, but as

| | |
|---|---|
| | though description above itdoes, when sticking to article being attached, entraining of air occurswith fisheye or other microscopic protuberance which exists in base film, external appearance quality of theabove-mentioned article being attached where surface protective film is stuck decreases considerably. |
| [illegible]0005[illegible] | [0005] |
| [illegible] | [Problems to be Solved by the Invention] |
| [illegible] | As for this invention, considering to above-mentioned fact, being somethingwhich you can do, in fractionize doing particle of air where thepurpose there being a fisheye or other microscopic protuberance in base film tackiness for article being attached making use of small tackifier layer, decreases quantity of air which is involved, at same time, is involved barely depending, external appearance quality of article being attached it is to offer surface protection film which does not havefact that it decreases. |
| [illegible]0006[illegible] | [0006] |
| [illegible] | [Means to Solve the Problems] |
| [illegible]0.910~0.918g/cm$^3$ [illegible]6~10[illegible]%[illegible]- [illegible] | It is something which designates surface protection film where as for this invention, in one surface of base film which consists of polyethylene resin of density 0.910~0.918 g/cm$^3$, the tackifier layer where vinyl acetate content designates ethylene-vinyl acetate copolymer of 6 - 10 weight% as the main component is provided and makes feature as gist. |
| [illegible]0007[illegible] | [0007] |
| [illegible]0.910~0.918g/cm$^3$ [illegible] | configuration is done as for polyethylene resin which, density is limited theabove-mentioned substrate film in polyethylene resin of 0.910 - 0.918 g/cm$^3$. |
| [illegible]0.910g/cm$^3$ [illegible] | Above-mentioned density under 0.910 g/cm$^3$, because substrate film whichconsists of said polyethylene resin has tackiness, those where surface protection film isdeveloped from product which windup is done becomes difficult. |
| [illegible]0.918g/cm$^3$ [illegible] | When also, above-mentioned density exceeds 0.918 g/cm$^3$, when thesticking to article being attached, entraining of air does not decrease, atsame time, gas bubble diameter of air which is involved becomes large,external appearance quality of above-mentioned article being attached where surface protective film is stuckdecreases considerably. |
| [illegible]JIS K 6760([illegible]5.2[illegible])[illegible] | Furthermore density of above-mentioned polyethylene resin means that itmeasured according to JIS K 6760 (5.2 density and density of "polyethylene test method "). |
| [illegible]0008[illegible] | [0008] |
| [illegible]-[illegible]6~10[illegible]%[illegible] | vinyl acetate content of ethylene-vinyl acetate copolymer which is a main component of above-mentioned adhesive is limited in 6 - 10 weight%. |

| | |
|---|---|
| [illegible]-[illegible]2~40[illegible]%[illegible]10[illegible]%[illegible] | Generally, vinyl acetate content those of 2 - 40 weight% is marketed as ethylene-vinyl acetate copolymer,,but when above-mentioned vinyl acetate content exceeds 10 weight%, initial tackiness of theabove-mentioned tackifier layer becomes too high, when furthermore, adding thermal history is received, adhesion enhancement does, surface protective film peels off making use ofaforementioned automatic exfoliation machine, it becomes impossible. |
| [illegible]6[illegible]%[illegible] | also, above-mentioned vinyl acetate content becomes insufficient, under 6 weight%,tackiness of above-mentioned tackifier layer cannot show surface protection function of the surface protection film in satisfactory. |
| [illegible]JIS K 6730([illegible]-[illegible]4.1[illegible])[illegible] | Furthermore above-mentioned vinyl acetate content means that it measured accordingto JIS K 6730 (quantification of 4.1 vinyl acetate content of "ethylene-vinyl acetate resin test method "). |
| [illegible]0009[illegible] | [0009] |
| [illegible]30~70[illegible]m[illegible]10~30[illegible]m[illegible]40~100[illegible]m[illegible] | configuration are done each thickness of base film and adhesive layer which isappropriately decided above-mentioned surface protection film with application of the surface protection film, but as for thickness of base film as for thickness of 30 -70;mu m[illegible] adhesive layer as for total thickness of 10 - 30;mu m[illegible] surface protection film those of 40 - 100;mu m extent are desirable. |
| [illegible]0010[illegible] | [0010] |
| [illegible] | according to need[illegible] ultraviolet absorber[illegible] antioxidant etc may be added by above-mentioned substrate and tackifier layer . |
| [illegible]0011[illegible] | [0011] |
| [illegible]T[illegible] | manufacturing method of surface protection film of this invention is not something which especiallyis limited. You can list multilayer coextrusion molding and lamination method with for example inflation method and T-die method . |
| [illegible]0012[illegible] | [0012] |
| [illegible] | [Embodiment of the Invention] |
| [illegible] | Working Example of this invention is explained below. |
| [illegible]0013[illegible] | [0013] |
| ([illegible]1) | (Working Example 1 ) |
| [illegible]([illegible]:L705[illegible]:0.918g/cm$^3$ )[illegible]40[illegible]m[illegible]-[illegible]([illegible]:510[illegible]:6[illegible]%)[illegible]20[illegible]m[illegible]60[illegible]m[illegible] | In order low density polyethylene (Sumitomo Chemical Co. Ltd. (DB 69-053-5307 ) supplied[illegible] tradename:L705[illegible] density:0.918 g/cm$^3$ ) thickness 40 ;mu m[illegible] ethylene-vinyl acetate copolymer (Tosoh Corporation (DB 69-057-1724 ) supplied[illegible] tradename:510[illegible] vinyl acetate content:6 weight% ) to become thickness 20 ;mu m, with coextrusion molding , surface protection film of total thickness 60 ;mu m was producedwith inflation method . |

| | |
|---|---|
| □0014□ | [0014] |
| (□□2) | (Working Example 2 ) |
| □□1□□□□□□□-□□□□□□□□□□-□□□□□□(□□□□□□:LV350□□□□□□:10□%)□□□□□□□1□□□□□□□□□□□□□ | Changing into ethylene-vinyl acetate copolymer of Tosoh Corporation (DB 69-057-1724 ) supplied of Working Example 1, itproduced surface protection film other than thing which uses ethylene-vinyl acetate copolymer (Mitsubishi Chemical Corporation (DB 69-056-6740 ) supplied□ tradename:LV350□ vinyl acetate content:10 weight% ), tosimilar to Working Example 1. |
| □0015□ | [0015] |
| (□□1) | (Comparative Example 1 ) |
| □□1□□□□□□□□□□□□□□□□□□□□(□□□□□□:YK-30□□:0.924g/cm$^3$ )□□□□□□□1□□□□□□□□□□□□□ | Changing into low density polyethylene of Sumitomo Chemical Co. Ltd. (DB 69-053-5307 ) supplied of Working Example 1, itproduced surface protection film other than thing which uses low density polyethylene (Mitsubishi Chemical Corporation (DB 69-056-6740 ) supplied□ tradename:YK-30□ density:0.924 g/cm$^3$ ), tosimilar to Working Example 1. |
| □0016□ | [0016] |
| (□□2) | (Comparative Example 2 ) |
| □□1□□□□□□□-□□□□□□□□□□-□□□□□□(□□□□□□:LV420□□□□□□:15□%)□□□□□□□1□□□□□□□□□□□□□ | Changing into ethylene-vinyl acetate copolymer of Tosoh Corporation (DB 69-057-1724 ) supplied of Working Example 1, itproduced surface protection film other than thing which uses ethylene-vinyl acetate copolymer (Mitsubishi Chemical Corporation (DB 69-056-6740 ) supplied□ tradename:LV420□ vinyl acetate content:15 weight% ), tosimilar to Working Example 1. |
| □0017□ | [0017] |
| □□□ | performance test |
| □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ | performance test was done vis-a-vis each surface protection film of Working Example and Comparative Example above, concerningfollowing item. |
| □□□□□□□□□□□□1□□□ | test result and overall evaluation which is based on this are shown in Table 1. |
| □0018□ | [0018] |
| 1.□□□□□□ | 1.air entraining incidence rate |
| □□□□□□□200mm□□250mm□□2mm□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□(□□□□□□)/(□□□□□□)×100□□□□□ | It stuck surface protection film, to acrylic resin sheet of width 200 mm□ length 250 mm□ thickness 2 mm, measured quantityof entraining of air, next, surface protection film peeled off, counting doing thequantity of fisheye of surface protection film which peels off, it calculated the air entraining incidence rate {(Quantity of entraining of air ) / (Quantity of fisheye ) X 100 } with fisheye . |
| □0019□ | [0019] |

2.□□□□

□□□□□□□□□□□□□□2mm□□□□□□□□□□□□23 deg C□□65%RH□□□□30□□□□□□□25mm□□□□180°□□□300mm/□ □□□□□□□□□□□□□

2.initial tackiness

surface protection film, was stuck to acrylic resin sheet of thickness 2 mm with laminator , thiswith temperature 23 deg C under environment of humidity 65%RH 30 min after leaving,peeled width 25 mm□ peel angular 180 deg, initial tackiness was measured with peeling rate 300 mm/min making use of tensile tester.

□0020□

[0020]

3.□□□□□

□□□□□□□□□□□□□□2mm□□□□□□□□□□□□□□□□□□□120 deg C×1□□□□□□□□□□□□□□23 deg C□□65%RH□□□□30□□□□□□23 deg C□□□□□□□25mm□□□□180°□□□300mm/□□□□□□□□□□□□□□□□□□□□□□□ □□□

3.adhesion enhancement characteristic evaluation

To stick surface protection film, to acrylic resin sheet of thickness 2 mm with laminator , in the hot air circulating oven, 120 deg CX 1 hour to heat this, until after that, it becomes ambient temperature,to cool, with 23 deg C 30 min to leave under environment of humidity 65%RH,after plate temperature cooling down to 23 deg C, peeled width 25 mm□ peel angular 180 deg,peel strength is measured with peeling rate 300 mm/min making use of tensile tester, adhesion enhancement characteristic evaluation was done.

□0021□

[0021]

□□1□

[Table 1]

| | | ポリエチレンの密度 (g/cm³) | 粘着剤層の酢酸ビニル含量（重量%） | エア巻込み発生率（%） | 初期接着力 (g/25mm) | 接着昂進性評価 (g/25mm) |
|---|---|---|---|---|---|---|
| 実施例 | 1 | ０．９１８ | ６ | １３ | ２ | １０ |
| | 2 | ０．９１８ | １０ | １０ | ４ | ８０ |
| 比較例 | 1 | ０．９２４ | ６ | ４５ | ２ | １０ |
| | 2 | ０．９２４ | １５ | １０ | １０ | ３８０ |

□0022□

□1□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□(□□1)□1/4□ □□□□□□□□□

[0022]

As been clear from Table 1 , as for each surface protection film of Working Example, the initial adhesive strength is low although 1/4 extent of incidence rate (Comparative Example 1 ) which usually happensand, has decreased winding incidence rate of air, considerably.

□□□□□□□□□□□□□□1□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□2□□□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□□

Vis-a-vis this, as for surface protection film of Comparative Example 1 which raises stiffness of substrate, winding incidence rate of air is large either, because as for surface protection film of Comparative Example 2 which raises initial tackiness, as for winding incidence rate of the air although it decreases, initial tackiness is high or, surface protection film it peelsoff from article being attached with automatic exfoliation machine, is difficult, especially adhesion enhancement characteristic to be considerable becomesbad, surface protection film after business it peels off from article being attached, itbecomes difficult skill.

▯0023▯

[illegible]

[illegible]

[illegible]

[0023]

[Effects of the Invention]

Because surface protection film of this invention, as though it is a description above,because configuration it is done, initial adhesive strength being low, winding of the air to be little when sticking to article being attached, being transparent doing surface protection film which is stuck, satisfactory can observe external appearance of the article being attached, as for external appearance inspection of article being attached of this kind, peeling offone by one, surface protection film necessity to do being gone, Inspection fabrication steps it can decrease sharply.

Because adhesion enhancement it does not do surface protection film of also, this invention, with the high temperature heating process, surface protection film after business can be used effectively to application which is easy to peel off from article being attached, heat treatment accompanies.

(19)日本国特許庁（ＪＰ）　(12) **公開特許公報**（Ａ）　(11)特許出願公開番号

**特開平9－227840**

(43)公開日　平成９年(1997)９月２日

| (51)Int.Cl.$^{6}$ | 識別記号 | 庁内整理番号 | ＦＩ | | 技術表示箇所 |
|---|---|---|---|---|---|
| Ｃ０９Ｊ　7/02 | ＪＨＵ<br>ＪＪＹ | | Ｃ０９Ｊ　7/02 | ＪＨＵ<br>ＪＪＹ | |

審査請求　未請求　請求項の数１　ＯＬ　（全 ３ 頁）

(21)出願番号　特願平8－38039

(22)出願日　平成８年(1996)２月26日

(71)出願人　000002174
積水化学工業株式会社
大阪府大阪市北区西天満２丁目４番４号

(72)発明者　小沼　茂
埼玉県蓮田市黒浜3535　積水化学工業株式会社内

## (54)【発明の名称】　表面保護フィルム

(57)【要約】

【課題】　被着体に対する粘着力を小さい粘着剤層を用い、基材フィルムにフィッシュアイ等の微細な突起があっても、巻き込まれるエアの量を少なくし、且つ、僅かに巻き込まれたエアの粒子を細分化させることにより、被着体の外観品質を低下させることのない表面保護フィルムを提供する。

【解決手段】　密度０．９１０～０．９１８ｇ／ｃｍ$^3$のポリエチレン樹脂からなる基材フィルムの一面に、酢酸ビニル含有量が６～１０重量％のエチレン－酢酸ビニル共重合体を主成分とする粘着剤層が設けられていることを特徴とする表面保護フィルム。

【特許請求の範囲】

【請求項１】　密度０．９１０〜０．９１８ｇ／ｃｍ$^3$のポリエチレン樹脂からなる基材フィルムの一面に、酢酸ビニル含有量が６〜１０重量％のエチレン−酢酸ビニル共重合体を主成分とする粘着剤層が設けられていることを特徴とする表面保護フィルム。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、合成樹脂板、化粧合板、金属板、塗装鋼板などの表面に仮着して、加工時や輸送時の塵の付着や傷つきがないように、その表面を保護するために使用される表面保護フイルムに関し、更に詳しくは、上記被着体に表面保護フイルムを貼り付けたまま、上記被着体の異物混入検査や高温加熱下で加工される合成樹脂板の表面を保護するために使用される表面保護フイルムに関する。

【０００２】

【従来の技術】従来、この種の表面保護フイルムとしては、基材フィルムの一面に粘着剤層が設けられたものが用いられるが、被着体への貼り付け時、貼付張力が大きいと、貼付後表面保護フイルムが収縮して上記被着体から剥離するが、これを防止するために、引張弾性率の大きな高密度ポリエチレンフィルムが基材フィルムとして用いられている。又、上記粘着剤層に用いられる粘着剤としては、上記表面保護フイルムの収縮によって被着体から剥離したり、被着体への貼り付け時、エアの巻き込みが起きないように高接着力の粘着剤が用いられる傾向にある。

【０００３】近年、自動化、省力化の進展によって、上記被着体への表面保護フイルムの貼付作業のみならず、被着体から使用後の表面保護フイルムを剥離する作業も自動剥離機が導入されている。上記自動剥離機を用いて表面保護フイルムを剥離する場合、上記被着体に対する接着力は可及的小さいことが望ましく、上記被着体への貼付作業時、粘着剤に求められる性能と拮抗する。

【０００４】上記被着体への貼付張力は、折衷的に低くする努力がなされているが、前記する如く、基材フィルムに存在するフィッシュアイ等の微細な突起によって被着体への貼り付け時、エアの巻き込みが起き、表面保護フイルムが貼付された上記被着体の外観品質を著しく低下させるのである。

【０００５】

【発明が解決しようとする課題】本発明は、叙上の事実に鑑みなされたものであって、その目的とするところは、被着体に対する粘着力を小さい粘着剤層を用い、基材フィルムにフィッシュアイ等の微細な突起があっても、巻き込まれるエアの量を少なくし、且つ、僅かに巻き込まれたエアの粒子を細分化させることにより、被着体の外観品質を低下させることのない表面保護フィルムを提供することにある。

【０００６】

【課題を解決するための手段】本発明は、密度０．９１０〜０．９１８ｇ／ｃｍ$^3$のポリエチレン樹脂からなる基材フィルムの一面に、酢酸ビニル含有量が６〜１０重量％のエチレン−酢酸ビニル共重合体を主成分とする粘着剤層が設けられていることを特徴とする表面保護フィルムをその要旨とするものである。

【０００７】上記基材フイルムを構成するポリエチレン樹脂は、密度が０．９１０〜０．９１８ｇ／ｃｍ$^3$のポリエチレン樹脂に限定される。上記密度が０．９１０ｇ／ｃｍ$^3$未満では、該ポリエチレン樹脂からなる基材フイルムが粘着性を持つために、巻重された製品から表面保護フィルムを展開するのが難しくなる。又、上記密度が０．９１８ｇ／ｃｍ$^3$を超えると、被着体への貼り付け時、エアの巻き込みが減少せず、且つ、巻き込まれるエアの気泡径が大きくなり、表面保護フイルムが貼付された上記被着体の外観品質を著しく低下させる。尚、上記ポリエチレン樹脂の密度は、ＪＩＳ　Ｋ　６７６０（「ポリエチレン試験方法」の５．２比重および密度）に準じて測定したものをいう。

【０００８】上記粘着剤の主成分であるエチレン−酢酸ビニル共重合体の酢酸ビニル含有量は６〜１０重量％に限定される。一般に、エチレン−酢酸ビニル共重合体としては、酢酸ビニル含有量が２〜４０重量％のものが市販されているが、上記酢酸ビニル含有量が１０重量％を超えると、上記粘着剤層の初期粘着力が高くなり過ぎ、更に、加熱履歴をうけると、接着昂進してしまい、前記自動剥離機を用いて表面保護フイルムを剥離することができなくなる。又、上記酢酸ビニル含有量が６重量％未満では、上記粘着剤層の粘着力が不足し、表面保護フィルムの表面保護機能を充分に発揮し得ない。尚、上記酢酸ビニル含有量は、ＪＩＳ　Ｋ　６７３０（「エチレン−酢酸ビニル樹脂試験方法」の４．１酢酸ビニル含量の定量）に準じて測定したものをいう。

【０００９】上記表面保護フィルムを構成する基材フィルムと粘着層の各厚さは、表面保護フィルムの用途によって適宜決定されるが、基材フィルムの厚さは３０〜７０μｍ、粘着層の厚さは１０〜３０μｍ、表面保護フィルムの総厚さは４０〜１００μｍ程度のものが好ましい。

【００１０】上記基材及び粘着剤層には、必要に応じて、紫外線吸収剤、酸化防止剤などが添加されてもよい。

【００１１】本発明の表面保護フィルムの製造方法は、特に限定されるものではないが、例えば、インフレーション法やＴダイ法による多層共押出成形やラミネーション法が挙げられる。

【００１２】

【発明の実施の形態】以下に本発明の実施例を説明する。

【００１３】（実施例１）低密度ポリエチレン（住友化学社製、商品名：Ｌ７０５、密度：０．９１８ｇ／ｃｍ$^3$）を厚さ４０μｍ、エチレン－酢酸ビニル共重合体（東ソー社製、商品名：５１０、酢酸ビニル含有量：６重量％）を厚さ２０μｍになるように、インフレーション法による共押出成形によって、総厚さ６０μｍの表面保護フィルムを作製した。

【００１４】（実施例２）実施例１の東ソー社製のエチレン－酢酸ビニル共重合体に替えて、エチレン－酢酸ビニル共重合体（三菱化学社製、商品名：ＬＶ３５０、酢酸ビニル含有量：１０重量％）を用いたこと以外、実施例１と同様にして表面保護フィルムを作製した。

【００１５】（比較例１）実施例１の住友化学社製の低密度ポリエチレンに替えて、低密度ポリエチレン（三菱化学社製、商品名：ＹＫ－３０、密度：０．９２４ｇ／ｃｍ$^3$）を用いたこと以外、実施例１と同様にして表面保護フィルムを作製した。

【００１６】（比較例２）実施例１の東ソー社製のエチレン－酢酸ビニル共重合体に替えて、エチレン－酢酸ビニル共重合体（三菱化学社製、商品名：ＬＶ４２０、酢酸ビニル含有量：１５重量％）を用いたこと以外、実施例１と同様にして表面保護フィルムを作製した。

【００１７】性能試験
以上の実施例および比較例の各表面保護フィルムに対し、次の項目について性能試験を行った。試験結果及びこれに基ずく総合評価を表１に示す。

【００１８】１．エア巻き込み発生率
表面保護フィルムを、幅２００ｍｍ、長さ２５０ｍｍ、厚さ２ｍｍのアクリル樹脂板に貼り付け、エアの巻き込み数を測定し、次いで、表面保護フィルムを剥離し、剥離した表面保護フィルムのフィッシュアイの数を計数して、フィッシュアイによるエア巻き込み発生率〔（エアの巻き込み数）／（フィッシュアイの数）×１００〕を算出した。

【００１９】２．初期粘着力
表面保護フィルムを、ラミネーターにて厚さ２ｍｍのアクリル樹脂板に貼り付け、これを温度２３℃で湿度６５％ＲＨの環境下に３０分放置した後、剥離幅２５ｍｍ、ピール角１８０°、剥離速度３００ｍｍ／分で引張試験機を用いて初期粘着力を測定した。

【００２０】３．接着昂進性評価
表面保護フィルムを、ラミネーターにて厚さ２ｍｍのアクリル樹脂板に貼り付け、これを熱風循環式オーブン中で、１２０℃×１時間加熱し、然る後、常温になるまで冷却し、２３℃で湿度６５％ＲＨの環境下に３０分放置し、板温が２３℃まで冷めてから、剥離幅２５ｍｍ、ピール角１８０°、剥離速度３００ｍｍ／分で引張試験機を用いて剥離力を測定し、接着昂進性を評価した。

【００２１】
【表１】

| | | ポリエチレンの密度（g/cm$^3$） | 粘着剤層の酢酸ビニル含量（重量%） | エア巻込み発生率（%） | 初期接着力（g/25mm） | 接着昂進性評価（g/25mm） |
|---|---|---|---|---|---|---|
| 実施例 | １ | ０．９１８ | ６ | １３ | ２ | １０ |
| | ２ | ０．９１８ | １０ | １０ | ４ | ８０ |
| 比較例 | １ | ０．９２４ | ６ | ４５ | ２ | １０ |
| | ２ | ０．９２４ | １５ | １０ | １０ | ３８０ |

【００２２】表１から明らかなとおり、実施例の各表面保護フィルムは、初期接着力が低いにも拘わらずエアの巻込み発生率は、通常起こるであろう発生率（比較例１）の１／４程度と、著しく減少している。これに対して、基材の剛性を高めた比較例１の表面保護フィルムは、エアの巻込み発生率が大きくなり、初期粘着力を高めた比較例２の表面保護フィルムは、エアの巻込み発生率は低減するものの、初期粘着力が高くなり、自動剥離機によって表面保護フィルムを被着体から剥離することが難しく、特に接着昂進性が著しく悪くなるため、用後の表面保護フィルムを被着体から剥離することが至難の技となる。

【００２３】
【発明の効果】本発明の表面保護フィルムは、叙上の如く構成されているので、初期接着力が低くても、被着体への貼付時にエアの巻込みが少なく、貼付された表面保護フィルムを透して被着体の外観を充分観察できるので、この種の被着体の外観検査は、一々表面保護フィルムを剥離して行う必要がなくなり、検査工数を激減させることができる。又、本発明の表面保護フィルムは、高温加熱処理で接着昂進しないので、用後の表面保護フィルムを被着体から剥離し易く、加熱処理を伴う用途に有効に使用することができる。